

B.8 NEAR EARTH OBJECT OBSERVATION

1. Scope of Program

Near Earth Objects (NEOs) are asteroids or old comet nuclei whose perihelia are less than 1.3 AU. NASA is committed to discovering all NEOs with diameters greater than or equal to 1 km and to characterizing that population through determination of their orbital elements, with a goal to detect 90 percent of this population by the end of 2008. In support of NASA's commitment and goal, this program supports ground-based telescopic NEO investigations whose primary objective is to inventory the population of NEOs with diameters greater than or equal to 1 km.

With respect to the inventory of NEOs, NASA seeks investigations that promise a sustained, productive search for NEOs and/or obtain follow-up observations of sufficient astrometric precision to allow the accurate prediction of the orbits of discovered objects. NASA will also consider within this program proposals to measure the sizes, shapes, and compositions of NEOs.

In keeping with NASA data rights policies, all funded NEO search or follow-up programs will be expected to make their data permanently available to the scientific community. Specifically, this requirement shall apply to all astrometric measurements of putative asteroids and comets that are made by NEO search and follow up programs funded under this NRA. In particular, the internationally recognized archive for this data is the International Astronomical Union's (IAU's) Minor Planet Center, currently located at the Harvard Smithsonian Astrophysical Observatory.

Finally, note that to enable the NASA Office of Space Science to properly evaluate the relevance of proposals submitted to its programs, as well as to track its progress towards achieving its goals as mandated by the Government Performance Review Act (GPRA), all research supported by NASA's programs must now demonstrate its relationship to NASA Goals and Research Focus Areas (RFAs) as stated in the latest version of its Strategic Plan (follow links from the Web site <http://spacescience.nasa.gov/>); see also the discussion in Section 1 of the *Summary of Solicitation* of this NRA. Therefore, all proposers to this program element are asked to state their perception of this relevance in terms of the Goals, Science Objectives, and RFAs given in Table 1 found in the Summary of Solicitation. In particular, this program element is designed to help fulfill Goal I RFAs 1(a) and (b) for the Solar System Exploration science theme. The appropriate place for this statement of relevancy is in the introduction to the proposal's "Scientific/Technical/Management" section (see Section 2.3.5 in the Guidebook for Proposers). The index numbers in this table may be used to identify a specific RFA, for example, "Goal I, Solar System Exploration, RFA 1(a)" or "Goal II, Solar System Exploration, RFA 1(b)."

2. Programmatic Considerations

Presently, about \$3.9M is budgeted for this program, of which approximately \$0.5M is dedicated to program office support at the NASA Jet Propulsion Laboratory for data analysis and search project coordination. Currently, 14 investigations are supported with the remaining funds. Owing to the expiration of some of the current awards, approximately \$0.6M will be open for competition through this NRA. The nominal duration of most investigations supported through this NEO Observations program is three years; however, programs having durations of up to five years may be proposed and may be supported if determined to be of exceptional merit.

- *Instrumentation*

The *Planetary Major Equipment* program described in Appendix B.12 of this NRA allows proposals for upgrading the analytical, computational, telescopic, and other instrumentation required by investigations for certain programs sponsored by the Solar System Exploration Division, including this one. New, analytical instrumentation requests, as well as requests for upgrades to existing instruments, costing more than \$25,000 should be identified and requested in a special section of each proposal, to be titled "Major Equipment Request." However, note that a Planetary Major Equipment proposal must be affiliated with a "parent" OSS research proposal in order to be considered; see Appendix B.12 for details.

IMPORTANT INFORMATION

As discussed in the *Summary of Solicitation* of this NRA, the Office of Space Science (OSS) now uses a unified set of instructions for the preparation and submission of proposals given in the document entitled *NASA Guidebook for Proposers Responding to NASA Research Announcement*. By reference the most recent edition of this document, *NASA Guidebook for Proposers - 2004* is incorporated into this NRA. This document may be accessed by opening <http://research.hq.nasa.gov/> and linking through "Helpful References," or by direct access at <http://www.hq.nasa.gov/office/procurement/nraguidebook/> (note that the updated 2004-edition of the *Guidebook* is used for this solicitation). Section IV(b) of this NRA's *Summary of Solicitation* contains the Web address relevant to the electronic submission of a *Notice of Intent* (NOI) to propose and a proposal's *Cover Page/Proposal Summary/Budget Summary*, as well as the mailing address for the submission of the hard copies of a proposal.

Note that this NEO program requires submission of 19 copies of the proposal plus the signed original instead of the default number of 15 copies given in the *Summary of Solicitation* of this NRA.

Additional information about this program may be obtained from the Program Officer:

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